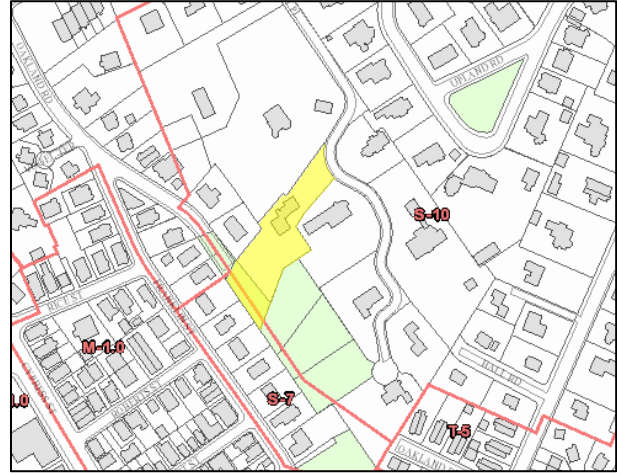


# Brookline Preservation Commission

## Local Historic District Report

Address: 61 Walnut Place  
District: Pill Hill LHD  
Applicant: Tiffani Wolf  
Date Built: c.1861/1964  
Architect: unknown  
Builder: unknown



### Statement of Significance:

This building was constructed as a carriage barn and stable for the Moses B. Williams House at 67 Walnut Place. According to the town tax lists, the barn was constructed by 1861. The house underwent two major conversions, leaving little historic fabric. In 1964 architect Thomas McNulty converted the barn into a single family dwelling. In 1979, major additions and alterations were completed by builder Paul Perella.

### Proposed Alterations:

The Applicant is proposing to install 50 LG all black 360W solar panels on 4 surfaces of the asphalt roof. On roof 1, 2 & 4 the panels will be mounted flat on aluminum racks while on roof 3 they will be installed at a slight angle.

## Applicable Guidelines:

The Preservation Commission's Design Guidelines for Local Historic Districts state that:

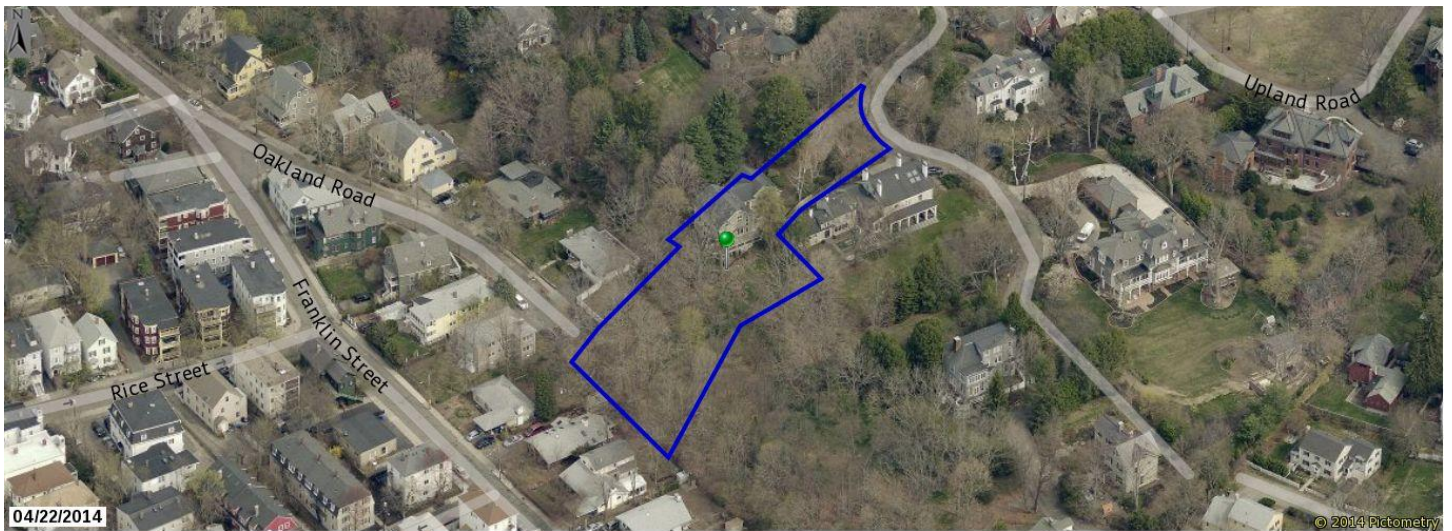
- When possible, renewable energy systems should be proposed for installation in locations where they will not be visible from a public way, park or body of water. In cases where this is not practicable, systems attached to buildings should not obscure historic features from public view, or be visible in a way which significantly alters the profile or character of the building.
- Historic materials and features such as cladding, trim, windows, doors, ornamental detailing and other elements should not be removed or altered; slate and terra cotta tile and other historic roofing materials should not be removed or altered.
- For proposed installations with visibility from a public way, park or body of water, the Commission will consider the historic and architectural significance of the facades which may be affected, including roofs and rooflines, the historic fabric, including materials, which may be affected, and the reversibility of the proposed system.
- Free-standing or detached installations should be located to minimize their visibility from public view and should not obscure historic features of nearby buildings. The Commission may request that installations be screened or enclosed with materials appropriate to the setting and district.

## Preliminary Findings:

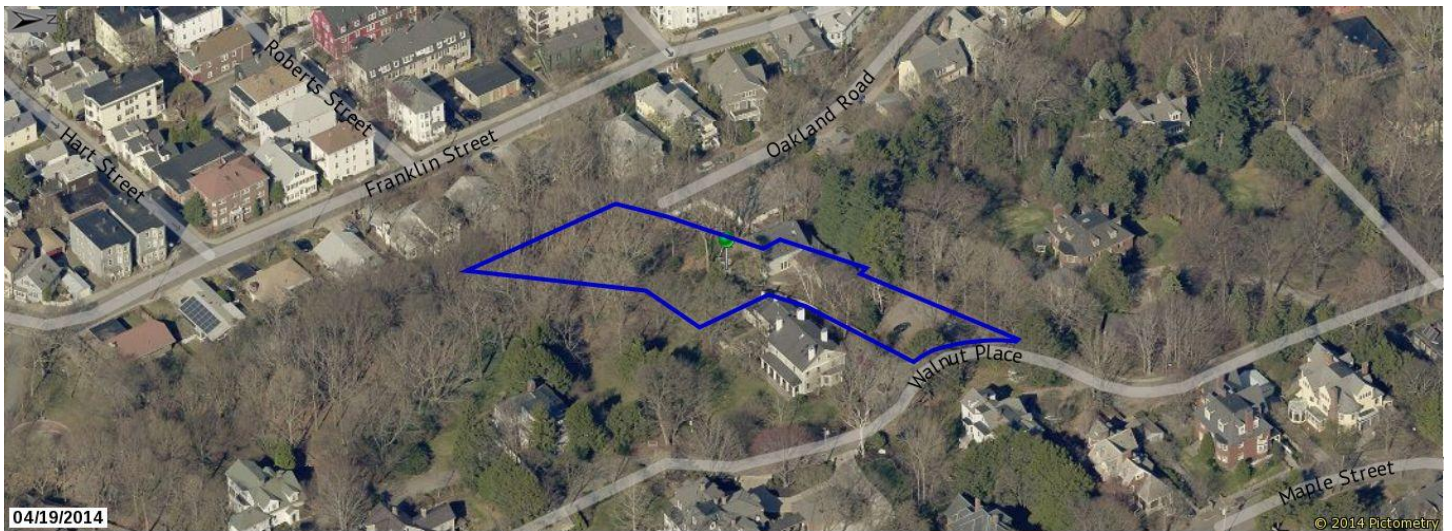
The only portion of this project that is visible from a public way is roof installation #1, which faces Oakland Road. Staff assessed the visibility of the project and felt that the panels would be minimally visible. Given the Commission's longstanding support for solar installations, staff issued a 10-Day letter on September 23<sup>rd</sup>. On October 1<sup>st</sup>, a response letter was received from an abutter, asking the Commission to reconsider the finding that the installation would be minimally visible.

The solar roof installation meets the recommended criteria set for renewable energy systems in the Design Guidelines. The system does not obscure any historic features from view or significantly alter the profile or character of the building. The asphalt roof surface is not a historic feature of the building. There is no effect to any façade that is visible from the public way (there are no visible facades on this building) and the building itself has been significantly altered over the years with little, if any, remaining historic fabric. For these reasons, the proposed solar installation may be considered appropriate to the historic district.



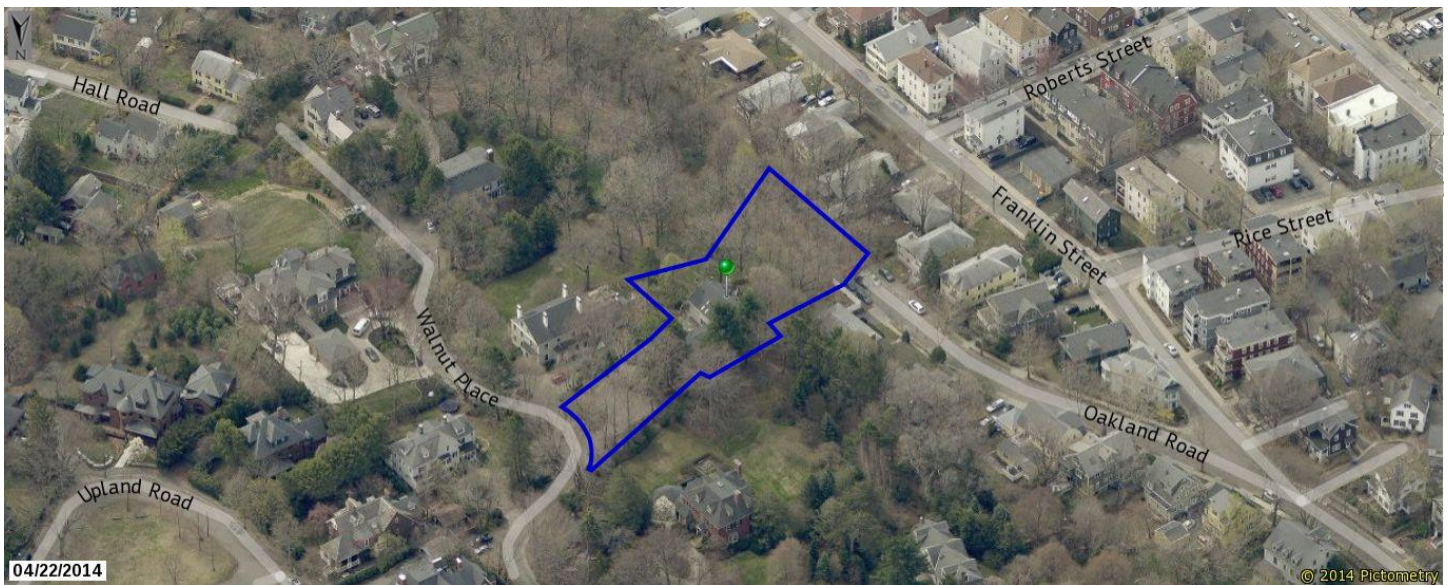


Ariel view of 61 Walnut Place, looking north.

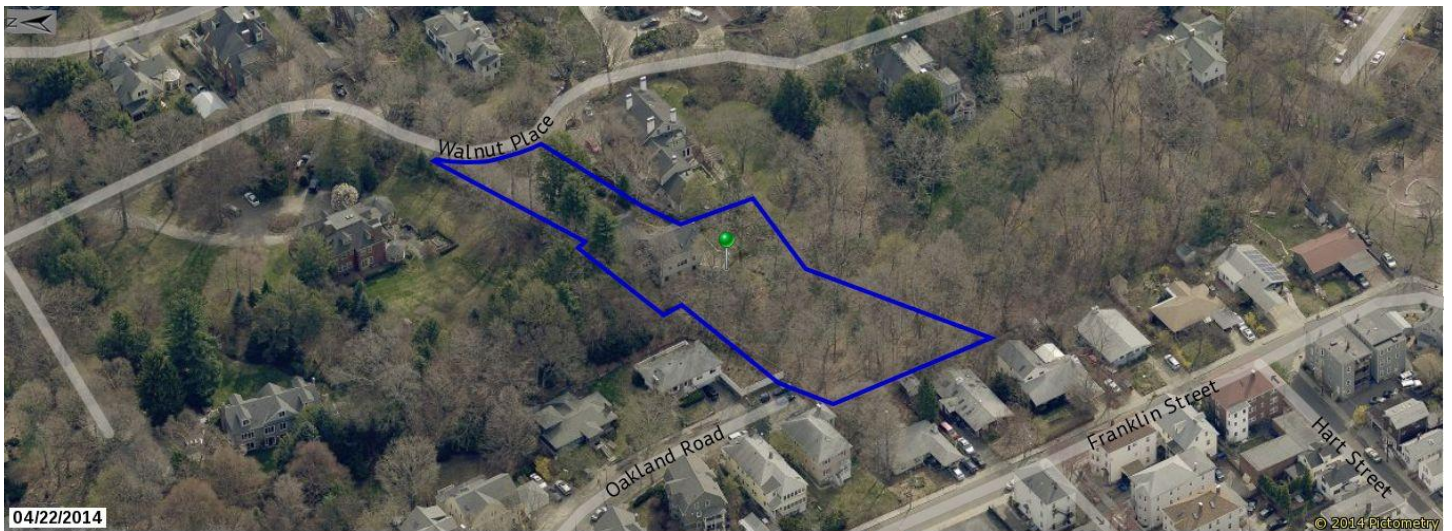


Aerial view of 61 Walnut Place, looking west.





Ariel view of 61 Walnut Place, looking south.



Aerial view of 61 Walnut Place, looking east.





Visibility of rear roof (solar panel installation #1), taken from the end of the public way on Oakland Road.





Close up of installation site #1, showing existing asphalt shingles.

## PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

MODULE TYPE	(50) LG3600IC-A5
INVERTER	(50) ENPHASE 107PLUS-72-2-US
OPTIMIZER	N/A
ARRAY PITCH	ROOF #1 - 33, ROOF #2 - 24, ROOF #3 - 0, ROOF #4 - 33°
ARRAY AZIMUTH	ROOF #1 - 238, ROOF #2 - 148, ROOF #3 - 148, ROOF #4 - 238°
RACKING	(ROOF #1, 2, 4) - XROO ALUMINUM RAIL. (ROOF #3) - ECOLIBRIUM BALLASTED RACKING SYSTEM BLACK IRONRIDGE
ATTACHMENT	(ROOF #1, 2, 4) - ECOSFASTEN GREENFASTEN GFI WITH SS 3"x 5/16" LAG SCREWS. (ROOF #3) - ECOLIBRIUM BALLASTED RACKING SYSTEM

## AUTHORITIES HAVING JURISDICTION:

BUILDING AUTHORITY	BROOKLINE MA
ELECTRICAL AUTHORITY	BROOKLINE MA
ZONING/PLANNING AUTHORITY	BROOKLINE MA
ELECTRICAL UTILITY	EVERSOURCE

## DESIGN CRITERIA:

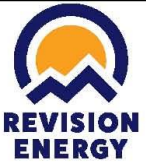
OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	128 MPH
RISK CATEGORY	II
GROUND SNOW LOAD	4.0 PSF
EXPOSURE CATEGORY	B
ROOF HEIGHT	20' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	ROOF #1 - 3"x8", ROOF #2 - 2"x12", ROOF #3 - 2"x12", ROOF #4 - 2"x12"
RAFTER SPACING	ROOF #1 - 28" O.C., ROOF #2 - 16" O.C., ROOF #3 - 16" O.C., ROOF #4 - 16" O.C.

## SHEET LIST:

G001	TITLE SHEET
A001	SITE PLAN
A002	MODULE LAYOUT
E001	ONE-LINE DIAGRAM

## GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH LOCAL AND STATE ORDINANCES AND BUILDING CODES.
2. ELECTRICAL INSTALLATION SHALL COMPLY WITH STATE AND LOCALLY ADOPTED ELECTRICAL CODE.
3. ROOF TOP PENETRATIONS SHALL BE SEALED.
4. ALL EQUIPMENT SHALL BE LISTED AND TESTED BY A RECOGNIZED LABORATORY.
5. SYSTEM SHALL CONFORM TO RAPID SHUTDOWN REQUIREMENTS PER NEC 690.
6. CONDUIT RUNS BETWEEN SUB-ARRAYS, COMBINERS, AND DISCONNECTS SHALL BE INSTALLED IN THE MOST DIRECT ROUTE POSSIBLE.
7. ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES REQUIRED BY NEC 110.
8. EQUIPMENT SHALL BE LABELED PER NEC 2017 REQUIREMENTS.



1980 TURNPIKE ST. BUILDING #2  
NORTH ANDOVER, MA 01845  
(978)-308-9041

### CLIENT:

BEN AND KATE TAYLOR  
61 WALNUT PLACE  
BROOKLINE MA, 02445

### SYSTEM TYPE:

18KW DC GRID TIED SOLAR  
PHOTOVOLTAIC SYSTEM

### FOR CONSTRUCTION

DESIGNED BY:	DAM
REVISION:	0
PRINT SIZE:	11" x 17"
DATE:	9/11/2020

### TITLE SHEET

THE NUMBER	G001
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THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS. APPLICABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND LOCAL GOVERNMENTAL AUTHORITIES.

## PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

MODULE TYPE	(50) LG360GIC-A5
INVERTER	(50) ENPHASE IQ7PLUS-72-2-US
OPTIMIZER	N/A
ARRAY PITCH	ROOF #1 - 33, ROOF #2 - 24, ROOF #3 - 0, ROOF #4 - 33°
ARRAY AZIMUTH	ROOF #1 - 238, ROOF #2 - 148, ROOF #3 - 148, ROOF #4 - 238°
RACKING	(ROOF #1, 2, 4) - XRI00 ALUMINUM RAIL, (ROOF #3) - ECOLIBRIUM BALLASTED RACKING SYSTEMBLACK IRONRIDGE
ATTACHMENT	(ROOF #1, 2, 4) - ECOSFASTEN GREENFASTEN GFI WITH SS 3"X 5/16" LAG SCREWS, (ROOF #3) - ECOLIBRIUM BALLASTED RACKING SYSTEM

## DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	128 MPH
RISK CATEGORY	II
GROUND SNOW LOAD	40 PSF
EXPOSURE CATEGORY	B
ROOF HEIGHT	20' ABOVE GRADE TO EAVES
ROOF COMPOSITION	ASPHALT SHINGLE
RAFTER	ROOF #1 - 3"X8", ROOF #2 - 2"X12", ROOF #3 - 2"X12", ROOF #4 - 2"X12"
RAFTER SPACING	ROOF #1 - 28" O.C., ROOF #2 - 16" O.C., ROOF #3 - 16" O.C., ROOF #4 - 16" O.C.

## INSTALLATION SAFETY PLAN:

THE CONSTRUCTION HAZARD ZONE IDENTIFIES AN AREA WHERE CREWS ARE EQUIPPED WITH HARD HATS AND PERSONAL PROTECTIVE EQUIPMENT. ADDITIONALLY, PERSONNEL ON THE ROOF ARE HARNESSSED WITH FALL PROTECTION GEAR AND ANCHORED TO THE ROOF AT ALL TIMES.



1980 TURNPIKE ST. BUILDING #2  
NORTH ANDOVER, MA 01845  
(978)-308-9041

### CLIENT:

BEN AND KATE TAYLOR  
61 WALNUT PLACE  
BROOKLINE MA, 02445

### SYSTEM TYPE:

18KW DC GRID TIED SOLAR  
PHOTOVOLTAIC SYSTEM

### FOR CONSTRUCTION

DESIGNED BY: DWH  
REVISION: 0  
PRINT SIZE: 11" X 17"  
DATE: 9/10/2020  
SHEET NO: 1

### SITE PLAN

PROJECT NO: A001

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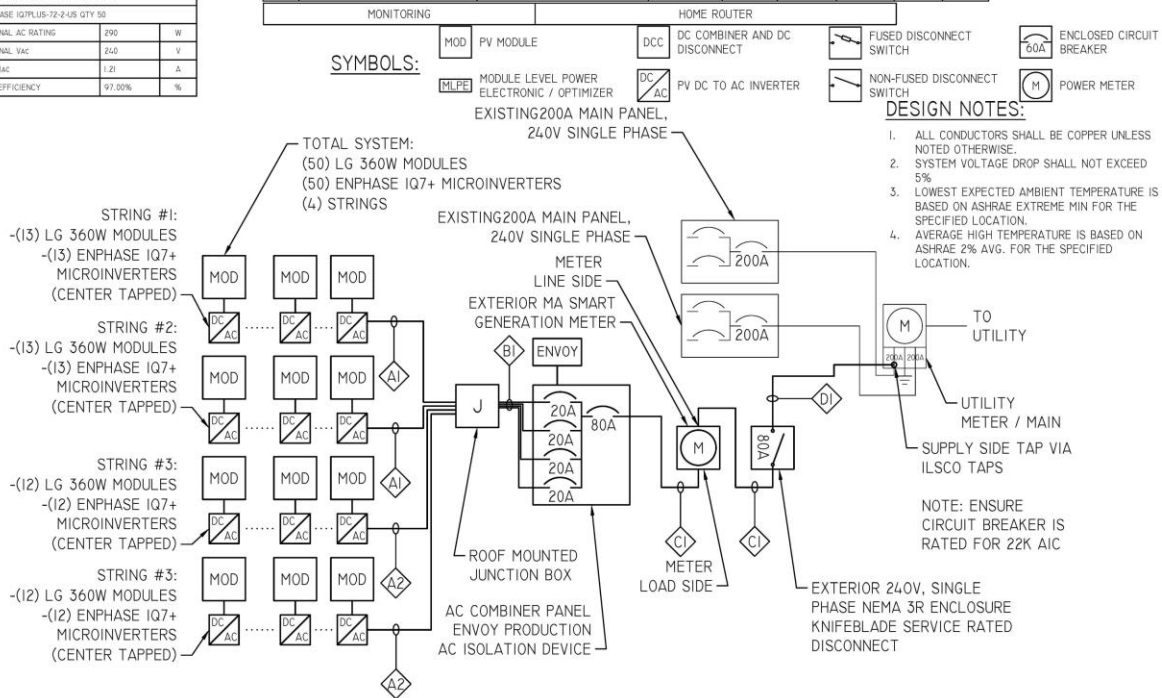
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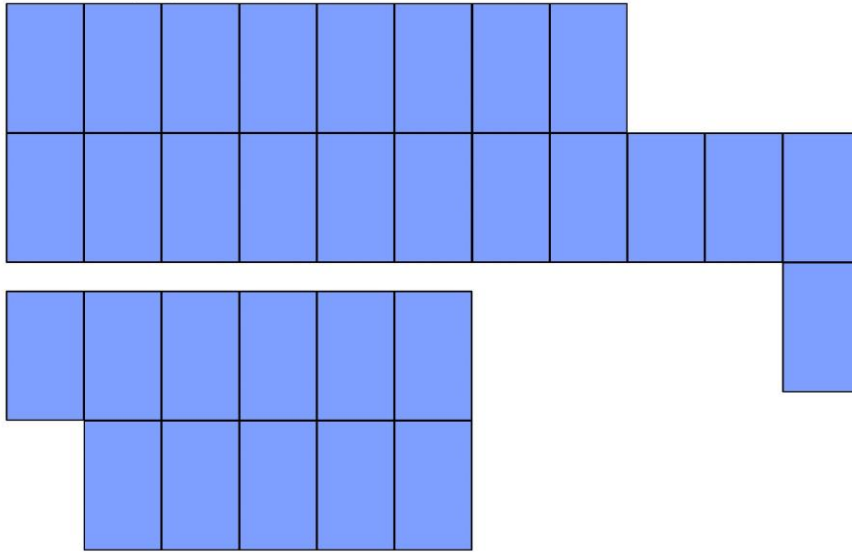




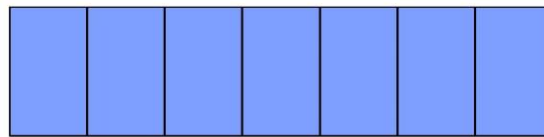


ROOF #3 - (12) MODULES - AZ: 148 - TILT: 0

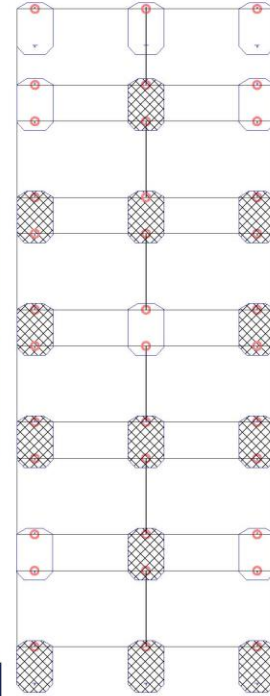
ROOF #1 - (20) MODULES - AZ: 238 - TILT: 33



ROOF #2 - (11) MODULES - AZ: 148 - TILT: 24



ROOF #4 - (7) MODULES - AZ: 238 - TILT: 33



INVERTER  
STICKER  
HERE

# STRING AND STICKER MAP

PLEASE CONNECT MODULES  
AS STRUNG. PLEASE SHOW  
ROOF PENETRATIONS.

BEN AND KATE TAYLOR  
61 WALNUT PLACE  
BROOKLINE MA, 02445



SUMMARY				RAIL LENGTH									CUT LIST	
TYPE	PRODUCT	DIMENSIONS	QUANTITY	RAIL SECTION TAG	NUMBER OF RAIL SECTIONS	QTY OF PANELS IN SECTION	RAFTER SPACING	MODULE ORIENTATION	RAIL ORIENTATION	RAIL LENGTH (IN)	FULL STICKS	CUT PIECE (IN)	RAIL LENGTH (IN)	QTY
MODULE:	LG360QIC-A5	40IN x 66.93IN	50	S1	2	8	28"	PORTRAIT	HORIZONTAL	328 5/8	1	(1) 80 5/8	80 5/8	2
RAIL:	IRON RIDGE XR100	248 IN	(4) FULL (14) CUT	S2	2	11	28"	PORTRAIT	HORIZONTAL	449 3/4	1	(1) 201 3/4	201 3/4	2
FASTENERS:	IRON RIDGE UFO	0.375 IN	88 MIN	S3	2	1	28"	PORTRAIT	HORIZONTAL	56	0	(1) 56	56	2
INVERTER				S4	2	6	16"	PORTRAIT	HORIZONTAL	247 7/8	0	(1) 247 7/8	247 7/8	2
ENPHASE IQ7PLUS-72-2-US				S5	2	5	16"	PORTRAIT	HORIZONTAL	207 1/2	0	(1) 207 1/2	207 1/2	2
				S6	2	7	16"	PORTRAIT	HORIZONTAL	288 1/4	0	(2) 144 1/8	144 1/8	4
WATTS / STRING														
Max MODS PER STRING														

